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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,997	02/08/2002	Hironori Motomura	020533	3796

23850 7590 05/05/2003

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WASHINGTON, DC 20006

EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 05/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/067,997

Applicant(s)

MOTOMURA ET AL.

Examiner

Tarifur R Chowdhury

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Specification*

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 1, applicant recites that the planar light source have a reflectance of from 50 to 90%. However, it is not disclosed in the specification as to how applicant achieves the disclosed reflection. Further, it is not disclosed in the specification as to whether the preferred range of reflection is referred to the light that comes out or internal reflection.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, applicant recites that the light source unit having a reflectance of from 50-90%. However, it is not clear as to whether the reflectance applicant is referring to is related to the total reflection of the light that exits or the internal reflection meaning the reflection inside the light guide plate. Therefore, the claim is vague and indefinite.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

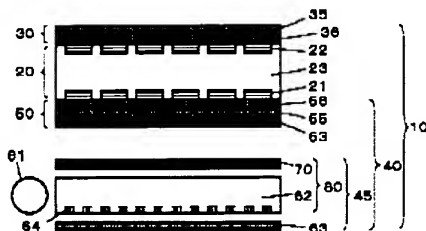
8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. **Claims 1-6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taku Honda (Honda), JP 2001-228310.**

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10. Honda discloses in the abstract and shows in Fig. 1, an illuminator comprising:

- a planar light source unit (45) wherein the light is emitted from a light source (61) provided separately from the planar light source (62) and incident on the planar light source; and



- a reflective type polarizer (53) disposed on a light exit side of the planar light source unit (45) so that a reflected light component and a transmitted light component of polarized light can be obtained from natural light incident on the reflective type polarizer (53).

Honda does not explicitly disclose that the light source has a reflectance of about 50 – 90%. However, Honda shows in Fig. 1 that the illuminator also includes a reflector 63. Further, the purpose of the reflector is to reflect as much as light as possible (preferably more than 50%) so that a bright display is obtained. Therefore, it would have at least been obvious to one of ordinary skill in the art that the planar light source is capable of reflecting at least 50% of light (overlaps the claimed range) so that a bright display is obtained.

Honda further shows that the illuminator also comprises a diffuser (70).

Accordingly, claims 1 and 4 would have been obvious.

As to claims 2 and 3, the basic function of a reflective polarizer is to transmit one polarized light and to reflect the other polarized light. Therefore, it would have at least been obvious to one of ordinary skill in the art that the polarized light reflectance of a reflective polarizer is at least not lower than 50%, and thus would have been obvious to optimize performance.

As to claim 5, Honda also shows in Fig. 1 that a liquid crystal display panel disposed on an upper side of the reflective type polarizer in the illuminator.

As to claim 6, making a linearly polarized light separating sheet of a multiplayer laminate of at least two kinds of materials different in refractive index is common and known in the art and thus would have been obvious to avail a proven technique and thus optimize performance.

As to claims 9 and 10, since the structure of Honda is similar to the structure as claimed, one of ordinary skill in the art would expect that the luminance to be improved by not less than 1.6 as compared to when no reflective polarizer is used.

**11. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda as applied to claims 1-6, 9 and 10 above and in view of Motomura et al., (Motomura), USPAT 6,016,177.**

12. Honda differs from the claimed invention because he does not explicitly disclose that the reflective polarizer is a circular polarizer made of cholesteric liquid crystal layers.

Motomura discloses a liquid crystal display wherein a circular polarizer that is

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made of cholesteric liquid crystal layers is used. Motomura also discloses that such type polarizer is advantageous since it provides a display with excellent luminance and good visibility (col. 1., lines 50-64).

Motomura is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use a reflective polarizer that is a circular polarizer and made of cholesteric liquid crystal layers.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the illuminator of Honda such that substitute the reflective polarizer with a reflective polarizer that is a circular polarizer and made of cholesteric liquid crystal layers so that a display with excellent luminance and good visibility is obtained, as per the teachings of Motomura.

Accordingly, claims 7 and 8 would have been obvious.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) USPAT 6,246,455 is related to a display device including a backlight and reflective polarizer.

b) USPAT 6,088,079 is related to a liquid crystal display including a circular polarizer made of cholesteric liquid crystal layers.

c) JP 2001-311826 is related to a circularly polarizing film with high brightness and a display device using the same.

d) JP 2001-067920 is related to a polarized back light and display device.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 305-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7005 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

A handwritten signature in black ink, appearing to read 'T. Chowdhury', with a long horizontal line extending to the right.

T. Chowdhury  
Primary Examiner  
Technology Center 2800

TRC  
April 26, 2003